

Appl. No. 09/989,251
Amendment and/or Response
Reply to Office action of 6 April 2006

Page 6 of 9

REMARKS / DISCUSSION OF ISSUES

Claims 11-20 are pending in the application. Claims 1-10 are canceled herein.

The applicants thank the Examiner for acknowledging the claim for priority and receipt of certified copies of all the priority documents.

The applicants' prior amendments have been ineffective in affecting the patentability of the claims. Claims 11-20 are submitted to substantially restore the claims to their original condition, except to remove figure label numbers, to replace European-style claim phraseology with American-style claim language, and to conform to U.S. patent practice. No new matter is added, and the intended scope of the claims, relative to the originally filed claims, is unchanged.

The applicants' prior remarks have also been ineffective in affecting the patentability of the claims, and the applicants hereby renounce and retract any and all comments submitted in prior correspondences relative to this application and the prior art.

The Office action had cited Faroudja (USP 5,724,248) and He et al. (USP 6,600,517, hereinafter He) in the rejection of original claims 1-10, and Faroudja and Astle (USP 5,590,064) in the rejection of the claims as amended.

The following comments are provided regarding the restored original claims 11-20 and this cited prior art.

Appl. No. 09/989,251
Amendment and/or Response
Reply to Office action of 6 April 2006

Page 7 of 9

With regard to He:

In accordance with 35 U.S.C. 103(c)(1):

Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the claimed invention was made, owned by the same person or subject to an obligation of assignment to the same person.

He was filed on 16 August 2000 and issued on 29 July 2003, during which time this invention was filed, and therefore is available as prior art under 35 U.S.C. 102(e).

Above is a statement of common ownership of He and this application at the time that this invention was made, as required by 35 U.S.C. 103(c) to disqualify He from being used in a rejection under 35 U.S.C. 103(a).

With regard to Faroudja and Astle:

Claim 11, upon which claims 12-16 depend, claims a method that includes decoding compressed encoded video signal, spatially enhancing the decoded video signal to provide a spatially enhanced signal; and applying a temporal up-conversion to the spatially enhanced video signal to provide a decompressed video signal at the original frame rate of the encoded signal.

In like manner, claim 17, upon which claims 18-20 depend, claims a decoder for decompressing a compressed encoded video signal that includes a decoder that decodes the compressed encoded video signal to provide a decoded signal having a frame rate less than the original frame rate, a spatial enhancer that spatially enhances the decoded signal to provide a spatially enhanced signal, and a temporal up-converter that temporally up-converts the spatially enhanced signal to provide a decompressed video signal at the original frame rate.

Neither Faroudja nor Astle teaches or suggests spatial enhancement of a decoded signal prior to temporal up-conversion of the video signal to its original frame rate.

Appl. No. 09/989,251
Amendment and/or Response
Reply to Office action of 6 April 2006

Page 8 of 9

Faroudja and Astle each teach spatial enhancement of a decoded signal, but both of these references teach that such enhancement occurs after the video signal is fully decoded and/or decompressed.

As is well known in the art, decoders and/or decompressors operate by applying the inverse functions of the encoder and/or compressor, in reverse order, to effectively 'undo' the encoding and/or compression. Corrections to anomalies caused by losses during the encoding-decoding or compressing-decompressing process, or other causes, are applied to the fully-reconstructed signal. In like manner, enhancements to an image, regardless of whether anomalies have been introduced, are applied to the image itself.

Faroudja teaches a vertical non-linear enhancer that enhances a fully decompressed and decoded signal to "expand the bandwidth of the applied [input] signal by controlled harmonic distortion of the original spectrum in the vertical domain". Faroudja does not teach spatial enhancement prior to a temporal up-conversion that restores the video to its original frame rate.

As best as the applicants can determine, Astle does not address transforms that affect the frame rate of the image, and does not teach or suggest applying a spatial enhancement to a lower frame-rate image before up-converting it to its original frame rate.

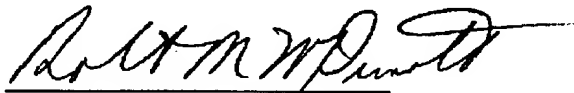
Because Faroudja and Astle fail to teach or suggest spatial enhancement of a decoded signal prior to temporal up-conversion of the video signal to its original frame rate, as specifically claimed in each of the independent claims 11 and 17, the applicants respectfully suggest that claims 11-20 are patentable over the cited prior art.

Appl. No. 09/989,251
Amendment and/or Response
Reply to Office action of 6 April 2006

Page 9 of 9

In view of the foregoing, the applicants respectfully request that the Examiner withdraw the rejections of record, allow all the pending claims, and find the application to be in condition for allowance. If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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